TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

2SA1943

POWER AMPLIFIER APPLICATIONS

Unit in mm

- Complementary to 2SC5200
- Recommended for 100W High Fidelity Audio Frequency Amplifier Output Stage.

1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	—
EIAJ	—
TOSHIBA	2-21F1A

Weight : 9.75g (Typ.)

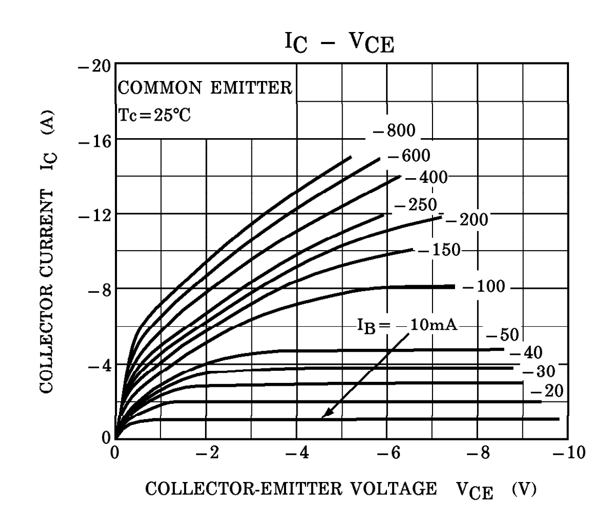
MAXIMUM RATINGS ($Ta = 25°C$)

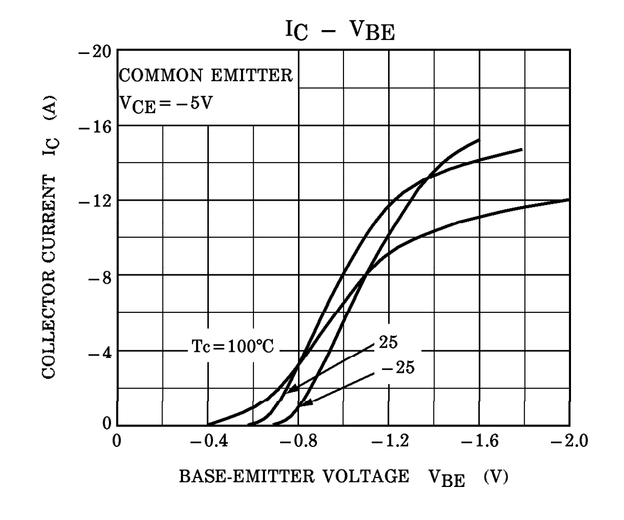
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−230	V
Collector-Emitter Voltage	V_{CEO}	−230	V
Emitter-Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−15	A
Base Current	I_B	−1.5	A
Collector Power Dissipation ($Tc = 25°C$)	P_C	150	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

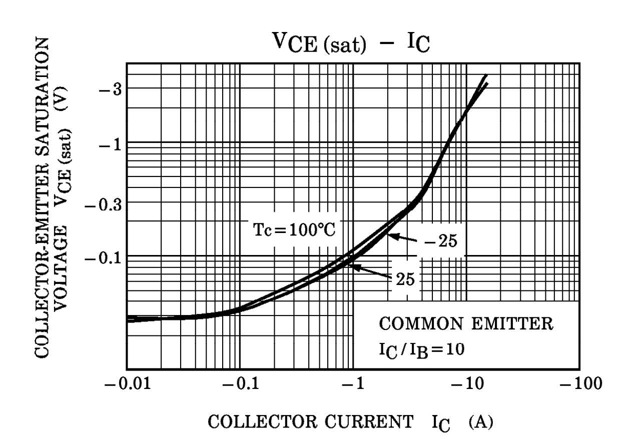
ELECTRICAL CHARACTERISTICS ($Ta = 25°C$)

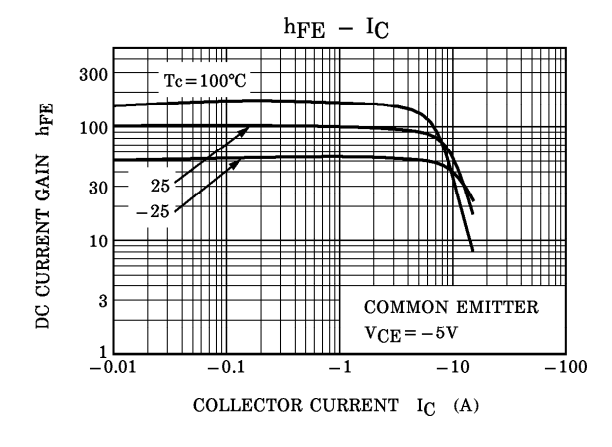
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -230V$, $I_E = 0$	—	—	−5.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V$, $I_C = 0$	—	—	−5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -50mA$, $I_B = 0$	−230	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = -5V$, $I_C = -1A$	55	—	160	
	$h_{FE(2)}$	$V_{CE} = -5V$, $I_C = -7A$	35	60	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -8A$, $I_B = -0.8A$	—	−1.5	−3.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -5V$, $I_C = -7A$	—	−1.0	−1.5	V
Transition Frequency	f_T	$V_{CE} = -5V$, $I_C = -1A$	—	30	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V$, $I_E = 0$, $f = 1MHz$	—	360	—	pF

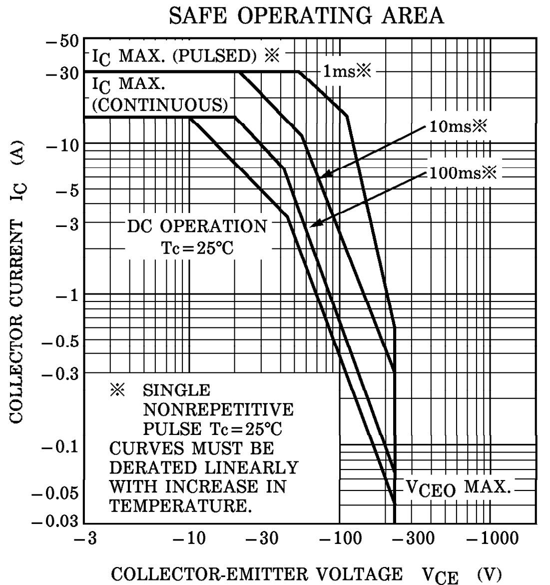
Note : $h_{FE(1)}$ Classification R : 55~110, O : 80~160


IC – VCE
COMMON EMITTER
Tc = 25°C
IB = –10mA
–800
–600
–400
–250
–200
–150
–100
–50
–40
–30
–20
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)


IC – VBE
COMMON EMITTER
VCE = –5V
Tc = 100°C
25
–25
COLLECTOR CURRENT IC (A)
BASE-EMITTER VOLTAGE VBE (V)


VCE (sat) – IC
Tc = 100°C
–25
25
COMMON EMITTER
IC / IB = 10
COLLECTOR-EMITTER SATURATION VOLTAGE VCE (sat) (V)
COLLECTOR CURRENT IC (A)


hFE – IC
Tc = 100°C
25
–25
COMMON EMITTER
VCE = –5V
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (A)


SAFE OPERATING AREA
IC MAX. (PULSED) ※
IC MAX. (CONTINUOUS)
1ms※
10ms※
100ms※
DC OPERATION
Tc = 25°C
※ SINGLE NONREPETITIVE PULSE Tc = 25°C
CURVES MUST BE DERATED LINEARLY WITH INCREASE IN TEMPERATURE.
VCEO MAX.
COLLECTOR CURRENT IC (A)
COLLECTOR-EMITTER VOLTAGE VCE (V)